

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=9; day=15; hr=15; min=44; sec=40; ms=198;]

=====

Application No: 10715417 Version No: 2.0

Input Set:

Output Set:

Started: 2008-09-13 06:22:08.491
Finished: 2008-09-13 06:22:11.944
Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 453 ms
Total Warnings: 89
Total Errors: 0
No. of SeqIDs Defined: 89
Actual SeqID Count: 89

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

Input Set:

Output Set:

Started: 2008-09-13 06:22:08.491
Finished: 2008-09-13 06:22:11.944
Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 453 ms
Total Warnings: 89
Total Errors: 0
No. of SeqIDs Defined: 89
Actual SeqID Count: 89

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (21) This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Straten, Eivind Per Thor
Andersen, Mads Hald

<120> Survivin-Derived Peptides and Use Thereof

<130> 60820.000004

<140> 10715417

<141> 2003-11-19

<150> 10/354,090

<151> 2003-01-30

<150> 60/352,284

<151> 2002-01-30

<160> 89

<170> PatentIn version 3.3

<210> 1

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur6 peptide

<400> 1

Phe Leu Lys Leu Asp Arg Glu Arg Ala

1 5

<210> 2

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur8 peptide

<400> 2

Thr Leu Pro Pro Ala Trp Gln Pro Phe Leu

1 5 10

<210> 3

<211> 10

<212> PRT

<213> Artificial Sequence

<220>
<223> Sur9 peptide

<400> 3

Glu Leu Thr Leu Gly Glu Phe Leu Lys Leu
1 5 10

<210> 4
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur1L2 peptide

<400> 4

Leu Leu Leu Gly Glu Phe Leu Lys Leu
1 5

<210> 5
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur1M2 peptide

<400> 5

Leu Met Leu Gly Glu Phe Leu Lys Leu
1 5

<210> 6
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 46-54 peptide

<400> 6

Cys Pro Thr Glu Asn Glu Pro Asp Leu
1 5

<210> 7
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

<223> Sur51-59 peptide

<400> 7

Glu Pro Asp Leu Ala Gln Cys Phe Phe
1 5

<210> 8

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur46Y9 peptide

<400> 8

Cys Pro Thr Glu Asn Glu Pro Asp Tyr
1 5

<210> 9

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur51Y9

<400> 9

Glu Pro Asp Leu Ala Gln Cys Phe Tyr
1 5

<210> 10

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Surl peptide

<400> 10

Leu Thr Leu Gly Glu Phe Leu Lys Leu
1 5

<210> 11

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> C1 peptide

<400> 11

Ile Leu Lys Glu Pro Val His Gly Val
1 5

<210> 12

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur2 peptide

<400> 12

Arg Ala Ile Glu Gln Leu Ala Ala Met
1 5

<210> 13

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur3 peptide

<400> 13

Lys Val Arg Arg Ala Ile Glu Gln Leu
1 5

<210> 14

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur4 peptide

<400> 14

Ser Thr Phe Lys Asn Trp Pro Phe Leu
1 5

<210> 15

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur5 peptide

<400> 15

Ser Val Lys Lys Gln Phe Glu Glu Leu
1 5

<210> 16

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur⁷ peptide

<400> 16

Thr Ala Lys Lys Val Arg Arg Ala Ile
1 5

<210> 17

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur¹⁰ peptide

<400> 17

Glu Thr Ala Lys Lys Val Arg Arg Ala Ile
1 5 10

<210> 18

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur 6-14 peptide

<400> 18

Leu Pro Pro Ala Trp Gln Pro Phe Leu
1 5

<210> 19

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur 11-19 peptide

<400> 19

Gln Pro Phe Leu Lys Asp His Arg Ile
1 5

<210> 20
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 34-43 peptide

<400> 20

Thr Pro Glu Arg Met Ala Glu Ala Gly Phe
1 5 10

<210> 21
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> C24 peptide

<400> 21

Tyr Pro Leu His Glu Gln His Gln Met
1 5

<210> 22
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur14-22 peptide

<400> 22

Leu Lys Asp His Arg Ile Ser Thr Phe
1 5

<210> 23
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur38-46 peptide

<400> 23

Met Ala Glu Ala Gly Phe Ile His Cys

1 5

<210> 24

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur93-101 peptide

<400> 24

Phe Glu Glu Leu Thr Leu Gly Glu Phe

1 5

<210> 25

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur47-56 peptide

<400> 25

Pro Thr Glu Asn Glu Pro Asp Leu Ala Gln

1 5 10

<210> 26

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur49-58 peptide

<400> 26

Glu Asn Glu Pro Asp Leu Ala Gln Cys Phe

1 5 10

<210> 27

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur92-101 peptide

<400> 27

Gln Phe Glu Glu Leu Thr Leu Gly Glu Phe

1

5

10

<210> 28
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> C1 peptide

<400> 28

Val Ser Asp Gly Gly Pro Asn Leu Tyr
1 5

<210> 29
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur14Y9 peptide

<400> 29

Leu Lys Asp His Arg Ile Ser Thr Tyr
1 5

<210> 30
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur93Y9 peptide

<400> 30

Phe Glu Glu Leu Thr Leu Gly Glu Tyr
1 5

<210> 31
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur92Y9 peptide

<400> 31

Gln Phe Glu Glu Leu Thr Leu Gly Glu Tyr
1 5 10

<210> 32
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur34Y9 peptide

<400> 32

Thr Pro Glu Arg Met Ala Glu Ala Gly Tyr
1 5 10

<210> 33
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur49Y9 peptide

<400> 33

Glu Asn Glu Pro Asp Leu Ala Gln Cys Tyr
1 5 10

<210> 34
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur92T2 peptide

<400> 34

Gln Thr Glu Glu Leu Thr Leu Gly Glu Phe
1 5 10

<210> 35
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur92S2 peptide

<400> 35

Gln Ser Glu Glu Leu Thr Leu Gly Glu Phe
1 5 10

<210> 36
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur93T2 peptide

<400> 36

Phe Thr Glu Leu Thr Leu Gly Glu Phe
1 5

<210> 37
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur93S2 peptide

<400> 37

Phe Ser Glu Leu Thr Leu Gly Glu Phe
1 5

<210> 38
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur38Y9 peptide

<400> 38

Met Ala Glu Ala Gly Phe Ile His Tyr
1 5

<210> 39
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur47Y10 peptide

<400> 39

Pro Thr Glu Asn Glu Pro Asp Leu Ala Tyr
1 5 10

<210> 40
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 5-13 peptide

<400> 40

Thr Leu Pro Pro Ala Trp Gln Pro Phe
1 5

<210> 41
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 53-61 peptide

<400> 41

Asp Leu Ala Gln Cys Phe Phe Cys Phe
1 5

<210> 42
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 54-62 peptide

<400> 42

Leu Ala Gln Cys Phe Phe Cys Phe Lys
1 5

<210> 43
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 95-103 peptide

<400> 43

Glu Leu Thr Leu Gly Glu Phe Leu Lys
1 5

<210> 44

<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 112-120 peptide

<400> 44

Lys Ile Ala Lys Glu Thr Asn Asn Lys
1 5

<210> 45
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Sur 13-22 peptide

<400> 45

Phe Leu Lys Asp His Arg Ile Ser Thr Phe
1 5 10

<210> 46
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 18-27 peptide

<400> 46

Arg Ile Ser Thr Phe Lys Asn Trp Pro Phe
1 5 10

<210> 47
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 53-62 peptide

<400> 47

Asp Leu Ala Gln Cys Phe Phe Cys Phe Lys
1 5 10

<210> 48
<211> 10

<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 84-93 peptide

<400> 48

Cys Ala Phe Leu Ser Val Lys Lys Gln Phe
1 5 10

<210> 49
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 101-110 peptide

<400> 49

Phe Leu Lys Leu Asp Arg Glu Arg Ala Lys
1 5 10

<210> 50
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur 103-112 peptide

<400> 50

Lys Leu Asp Arg Glu Arg Ala Lys Asn Lys
1 5 10

<210> 51
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sure 112-121 peptide

<400> 51

Lys Ile Ala Lys Glu Thr Asn Asn Lys Lys
1 5 10

<210> 52
<211> 10
<212> PRT

<213> Artificial Sequence

<220>

<223> Sur 113-122 peptide

<400> 52

Ile Ala Lys Glu Thr Asn Asn Lys Lys Lys
1 5 10

<210> 53

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> C3 peptide

<400> 53

Ile Leu Arg Gly Ser Val Ala His Lys
1 5

<210> 54

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur5K9 peptide

<400> 54

Thr Leu Pro Pro Ala Trp Gln Pro Lys
1 5

<210> 55

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur53K9 peptide

<400> 55

Asp Leu Ala Gln Cys Phe Phe Cys Lys
1 5

<210> 56

<211> 9

<212> PRT

<213> Artificial Sequence

<220>
<223> Sur54L2 peptide

<400> 56

Leu Leu Gln Cys Phe Phe Cys Phe Lys
1 5

<210> 57
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur13K9 peptide

<400> 57

Phe Leu Lys Asp His Arg Ile Ser Thr Lys
1 5 10

<210> 58
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur18K10 peptide

<400> 58

Arg Ile Ser Thr Phe Lys Asn Trp Pro Lys
1 5 10

<210> 59
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur113L2 peptide

<400> 59

Ile Leu Lys Glu Thr Asn Asn Lys Lys Lys
1 5 10

<210> 60
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> SurEx3-A3-1 peptide

<400> 60

Thr Ile Arg Arg Lys Asn Leu Arg Lys
1 5

<210> 61
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> SurEx3-A3-2

<400> 61

Pro Thr Ile Arg Arg Lys Asn Leu Arg Lys
1 5 10

<210> 62
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Sur2b-A3-1 peptide

<400> 62

Arg Ile Thr Arg Glu Glu His Lys Lys
1 5

<210> 63
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> C4 peptide

<400> 63

Ala Val Phe Asp Arg Lys Ser Asp Ala Lys
1 5 10

<210> 64
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

<223> C6 peptide

<400> 64

Gln Pro Arg Ala Pro Ile Arg Pro Ile

1 5

<210> 65

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> C7 peptide

<400> 65

Arg Pro Pro Ile Phe Ile Arg Arg Leu

1 5

<210> 66

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur4-14 peptide

<400> 66

Pro Thr Leu Pro Pro Ala Trp Gln Pro Phe Leu

1 5 10

<210> 67

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur18-28 peptide

<400> 67

Arg Ile Ser Thr Phe Lys Asn Trp Pro Phe Leu

1 5 10

<210> 68

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur54-64 peptide

<400> 68

Leu Ala Gln Cys Phe Phe Cys Phe Lys Glu Leu
1 5 10

<210> 69

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur86-96 peptide

<400> 69

Phe Leu Ser Val Lys Lys Gln Phe Glu Glu Leu
1 5 10

<210> 70

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur88-98 peptide

<400> 70

Ser Val Lys Lys Gln Phe Glu Glu Leu Thr Leu
1 5 10

<210> 71

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Sur103-113 peptide

<400> 71

Lys Leu Asp Arg Glu Arg Ala Lys Asn Lys Ile
1 5 10

<210> 72

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> EBV, BMLF1 peptide

<400> 72

Gly Leu Cys Thr Leu Val Ala Met Leu
1 5

<210> 73

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> HIV, Pol peptide

<400> 73

Ile Leu Lys Glu Pro Val His Gly Val
1 5

<210> 74

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Influenza A, nucleoprotein 265-273 peptide

<400> 74

Ile Leu Arg Gly Ser Val Ala His Lys
1 5

<210> 75

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> ML-IAP245 peptide

<400> 75

Arg Leu Gln Glu Glu Arg Thr Cys Lys Val
1 5 10

<210> 76

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> ML-IAP280 peptide

<400> 76

Gln Leu Cys Pro Ile Cys Arg Ala Pro Val
1 5 10

<210> 77
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP90 peptide

<400> 77

Arg Leu Ala Ser Phe Tyr Asp Trp Pro Leu
1 5 10

<210> 78
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP154 peptide

<400> 78

Leu Leu Arg Ser Lys Gly Arg Asp Phe Val
1 5 10

<210> 79
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP230 peptide

<400> 79

Val Leu Glu Pro Pro Gly Ala Arg Asp Val
1 5 10

<210> 80
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP98 peptide

<400> 80

Pro Leu Thr Ala Glu Val Pro Pro Glu Leu
1 5 10

<210> 81
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP34 peptide

<400> 81

Ser Leu Gly Ser Pro Val Leu Gly Leu
1 5

<210> 82
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP54 peptide

<400> 82

Gln Ile Leu Gly Gln Leu Arg Pro Leu
1 5

<210> 83
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP99 peptide

<400> 83

Leu Thr Ala Glu Val Pro Pro Glu Leu
1 5

<210> 84
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP83 peptide

<400> 84

Gly Met Gly Ser Glu Glu Leu Arg Leu

<210> 85
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> ML-IAP200 peptide

<400> 85

Glu Leu Pro Thr Pro Arg Arg Glu Val
1 5

<210> 86
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Nonapeptide potentially having the ability to bind to HLA-A1

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (4)..(6)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (8)..(8)
<223> Xaa can be any naturally occurring amino acid

<400> 86

Xaa Thr Asp Xaa Xaa Xaa Leu Xaa Tyr
1 5

<210> 87
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Nonapeptide potentially having the ability to bind to HLA-A1

<220>

```
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (4)..(6)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (8)..(8)
```